UCS STP004 Firmware Core Activation

When a new release of UCS code is released you need to do a few things in sequence, and add these all together you get something called "UCS Upgrade Standard Operating Procedure".

STP001	Notification of Release
STP002	Research and Plan the Release
STP003	Download the Release
STP004	**Firmware Core Activation**
STP005	Firmware Component Activation
STP006	Backup the Release

Table 1 - List of Standard Technical Procedures in the UCS Upgrade Standard Operating Procedure"

This document describes how to execute STP004 Firmware Core Activation, which will result in your Fabric Interconnects, UCS Manager and IOMs being updated to a new release.

Contents

- **Location** – This document is on the web at https://supportforums.cisco.com/docs/DOC-8584
- **Prerequisites** - Before starting this procedure you should have completed steps 1-3 of the "UCS Upgrade Standard Operating Procedure" and have a verified release package available on UCSM.
- **Author** – Steve Chambers, Unified Computing, Cisco Advanced Services, Europe.
- **Advanced Services** – Do it right, first time, every time, with Cisco.
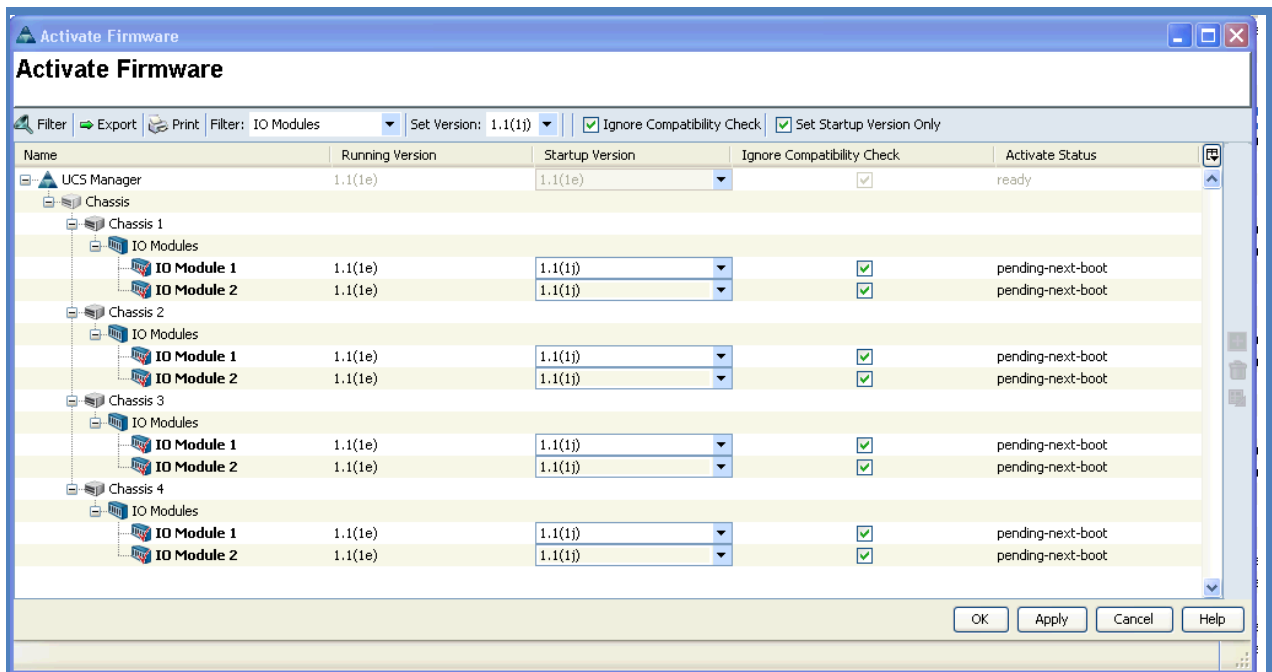
Act 1: Stage the FEX/IOMs Upgrade

Summary: Update and ready the FEX/IOMs for activation, which is triggered when each FI is activated.

The fastest way to do this is via the GUI and Upgrade (but not Activate) all IOMs. Use the Filters at the top to isolate the IOMs. There is no impact on service at this point.
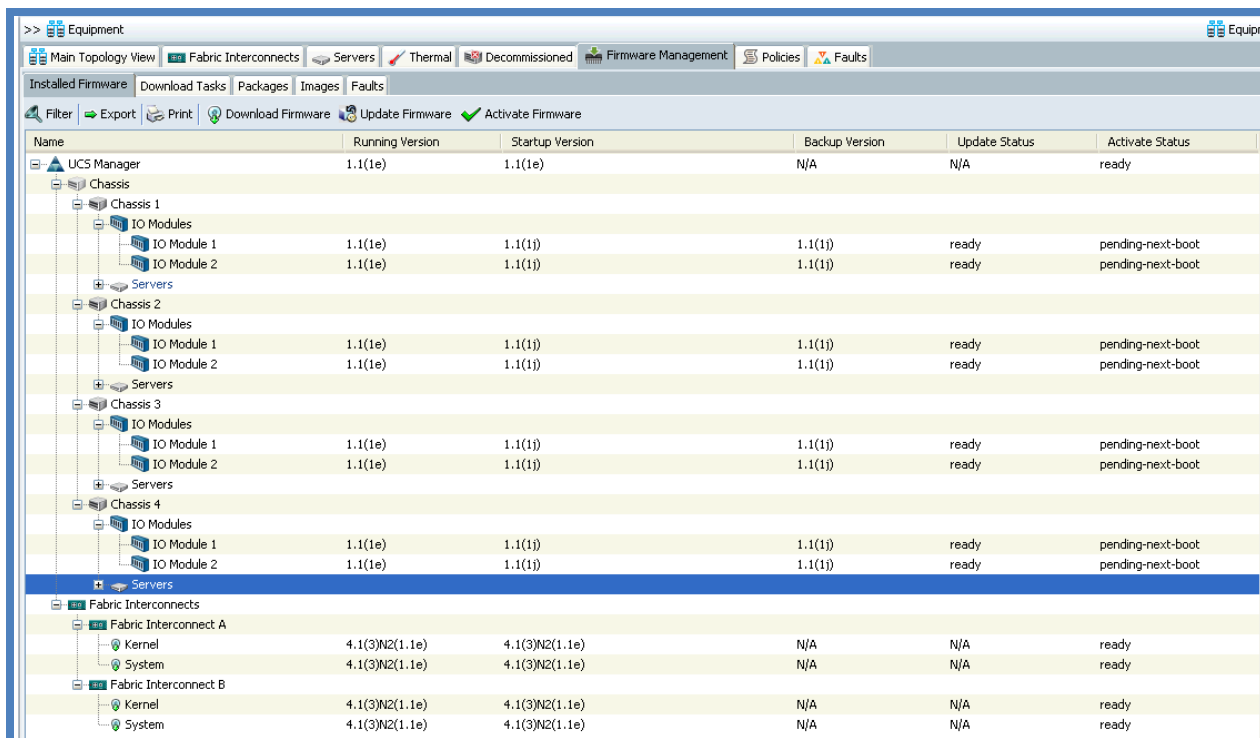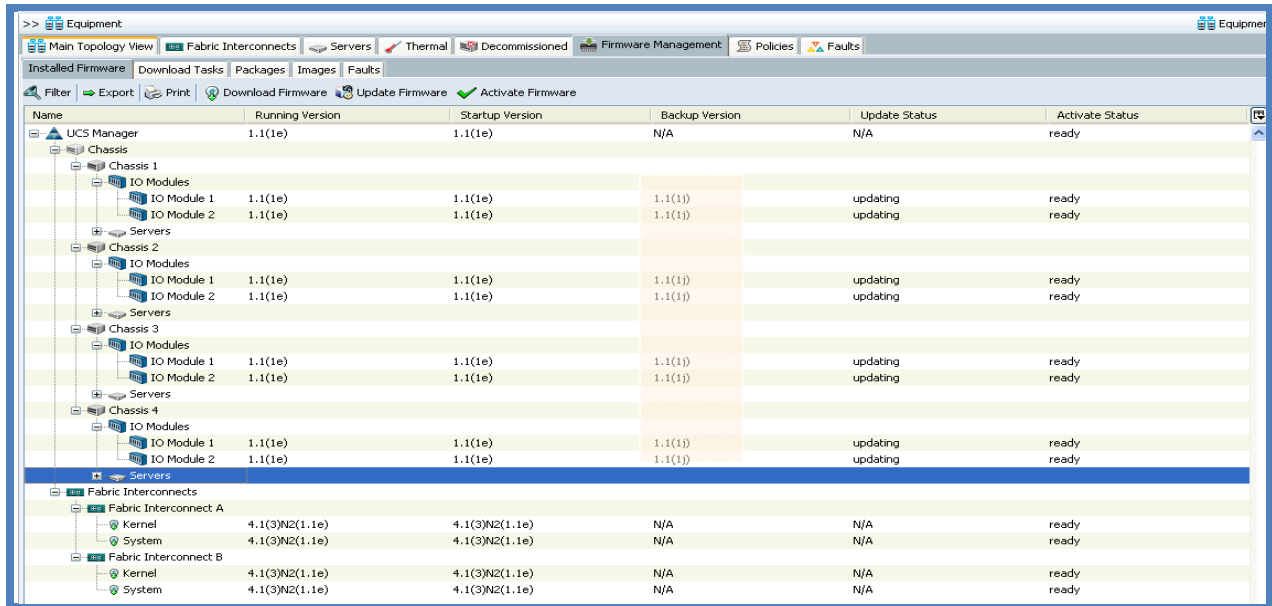

The next step is to Activate with Set Startup Only

Act 2: Update UCS Manager

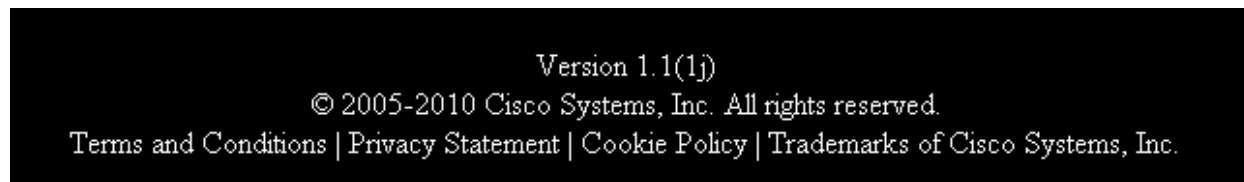*Summary: Update and activate the new UCS Manager code: this only disrupts administration/GUI.*

The current situation is that all IOMs are updated but awaiting reboot to activate the change.

To update and activate UCSM, right-click UCS Manager and select Activate Firmware, selecting 1.1j, and OK – expect to get logged out! ☺

Log out of all browsers and client devices, ready to login to the new system. The only impact to service is on administrators using UCSM, nothing else is affected.

Act 3: Update the Fabric Interconnects

Summary: Update and activate the fabrics in turn.

Activating the fabric interconnect causes all the attached IOMs to reset and because we have modified them with a new release, they will activate their new code at the same time.

This change causes all virtual interfaces (VNICs and VHBAs) on one fabric to lose connection for a minute or so. The other fabric is unaffected. If you have failover software on your blade (e.g. vSphere) then there should be no interruption in service but you will see the vmnic and vmhba interfaces on one fabric have a "link down" state for a few minutes.

To make sure we update the correct fabric interconnect first, which must be the Subordinate, let's check the cluster situation – you need to SSH to UCS and issue the following command.

```
BRUTAC-AS-A# show cluster state
Cluster Id: 0x813d8d0043b311de-0xb49b000decb25a04
A: UP, PRIMARY
B: UP, SUBORDINATE
HA READY
```

Activate the firmware on the Subordinate which in this case is Fabric Interconnect B – GUI is easiest.

There are multiple ways to do this, one way is to right-click on the Fabric Interconnect in the Firmware page and select "Activate Firmware". Then you need to change the Kernel and System firmware versions in the pop up.
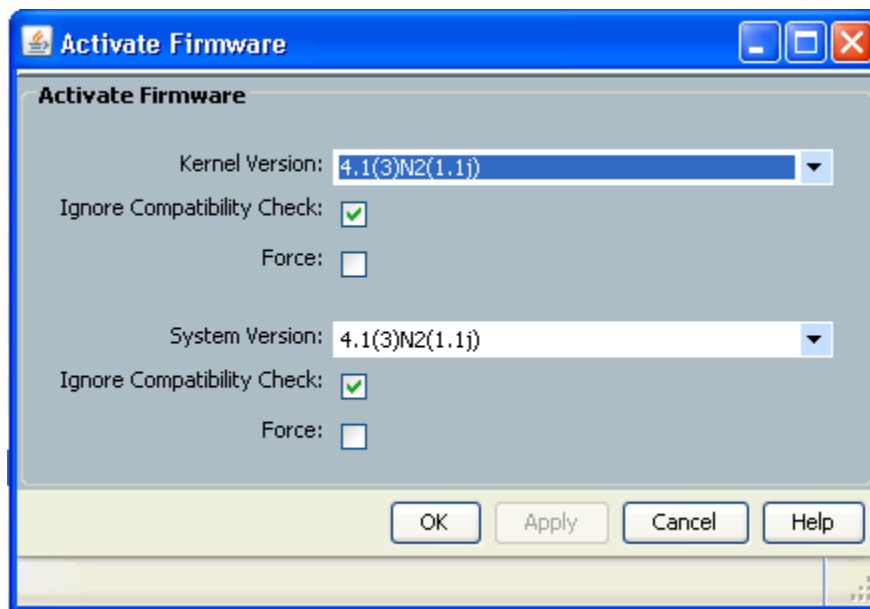

Figure 1 - Activating a fabric interconnect firmware upgrade

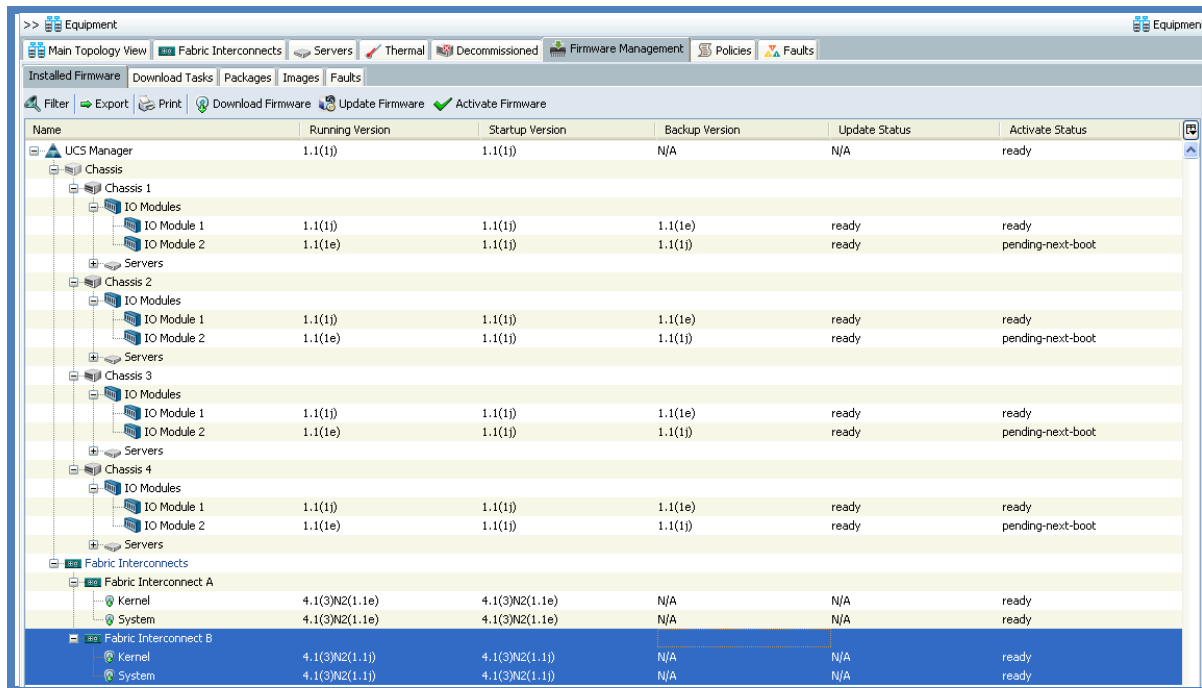The activation can take up to ten minutes because all the IOMs on that fabric are also reset and updated.

Figure 2 - Activating the release on the subordinate fabric interconnect

Above you can see that one half of the UCS core has been updated – Fabric Interconnect B and all IO Module 1.

Now we've upgraded the Subordinate, let's make it the Primary by SSH'ing and saying 'cluster lead b':

```
BRUTAC-A /fabric-interconnect # connect local-mgmt

<snipped messaged>

BRUTAC-A(local-mgmt)# cluster lead b
Cluster Id: 0x9ee987cadfb11de-0x98c5000deabcdefg

If SSH'd to the VIP you will lose your SSH connection – SSH back
Wait a few minutes for the HA READY state

BRUTAC-A# show cluster state
Cluster Id: 0x9ee987cadfb11de-0x98c5000decdecf44

A: UP, SUBORDINATE
B: UP, PRIMARY

HA READY
```

Now update the remaining Fabric Interconnect via the GUI which will reset and update all the remaining IOMs.

Figure 3 - Core activation comple with UCSM, FI and IOMs all updated